

**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**  
Office of Fire and Aviation  
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Information Bulletin No. OF&A 99-044

To: SDs

From: Director, Office of Fire and Aviation

Subject: Remote Automatic Weather Station Technologies

This information bulletin has been generated to inform Remote Automatic Weather Station (RAWS) users of developments that have occurred within RAWS technologies. It also serves to notify users of potential impacts that may affect their systems.

## **SYSTEM UPGRADES**

There have been some changes occurring in the areas of RAWS technology and system upgrades. As you may be aware, the BLM (Resource Management) has started the replacement of existing Handar H540 Data Collection Platforms (DCP) with the H555 models. This was due to the aging H540 systems. BLM Fire is reviewing a proposed Life Cycle Management Replacement Plan.

The BLM Fire RAWS and Resource Remote Environmental Monitoring System (REMS) sites have been upgraded with the installation of solar radiation sensors. Preliminary tests performed by the Missoula Fire Lab using the solar radiation data as a direct indication of the "state of the weather" have proven to be very accurate. However, it is still in the "experimental" stage and hasn't been released into the National Fire Danger Rating System (NFDRS) portion of the Weather Information Management System (WIMS) yet. RAWS sites located on "O&C" lands in Western Oregon will be receiving this upgrade during FY99.

As computers and ADP processes increase in capability, the need for near real time weather data to drive applications within these systems will dramatically increase. As more and more programs are developed for wildland fire management, almost every program, process, or presentation needs accurate weather data. To that end, we are planning to provide short interval refresh capabilities from our network of RAWS/REMS in the western United States and Alaska.

The Office of Fire and Aviation has recently submitted a proposal to National Oceanic and Atmospheric Administration/National Environmental Satellite Data Information Service (NOAA/NESDIS) to provide enhanced capabilities for the Bureau's RAWS/REMS network.

Specifically, within the next three to five years, all BLM DCPs will be capable of transmitting data at higher speeds and providing data updates and transmissions every 30 minutes. Eventually, it may even be possible to implement 15-minute transmission intervals.

## **Y2K ISSUES**

The Handar H540 & H555 DCPs are Y2K compliant when utilizing Geostationary Operational Environmental Satellite (GOES) telemetry. The only exception to the compliance issue is when the DCPs are using internal "data logging" (archiving) on-site. In this configuration, a Random Access Memory (RAM) card is located internally within the DCP. In addition to the GOES capabilities, the DCP internally logs or archives all data scans. After 00:01, January 1, 2000, data logged prior to that time will not be retrievable. Any 1999 data that is valuable to your respective program must be downloaded prior to midnight, December 31, 1999, using your local laptop computer. However, beginning January 1, all data logged from that day forward will be archived as usual.

## **RAWS Using Voice Systems & Narrowbanding**

There are a number of RAWS within the BLM and other agencies that use synthesized voice VHF/UHF output to field users. Most of these sites have either a King or Motorola handheld radio installed in the DCP or in a separate enclosure. These "talkers" have not been impacted by the "Y2K bug." However, there are still issues that need to be addressed: 1) All of the radios that are components within the talkers do not meet the approaching "Narrowbanding" requirements. Therefore, these radios must be changed at the same time your district/state network is upgraded. 2) Under current DOI guidelines, all VHF radios will need to be replaced by the year 2005 and all UHF radios by 2007. 3) Further, when you purchase replacement radios, they must be narrowband digital and in compliance with Telecommunications Industry Association/Electronic Industries Association (TIA/EIA) 102 and Association of Public Safety Communications Officials (APCO) Project 25.

If you have any questions concerning this information bulletin, please contact either John Gebhard or Phil Sielaff of my staff at (208) 387-5164 or (208) 387-5726, respectively.

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